BUSINESS

Get ready for gardening season with tips from a soil science expert at Mountain Roots Food Project

A spring volunteer at Mountain Roots Food Project in the Gunnison Valley works inside one of two high tunnels. Season extension is essential for cultivating vegetables in Gunnison's cold climate. (Courtesy/Mountain Roots Food Project)

By **EMILY KEMME** | emilykemme@me.com |
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While you're waiting for spring weather patterns to stop see-sawing between sunshiny days and blanketing yards with several inches of snow, it might be hard to believe that it's time to start planning your summer vegetable garden.

Never mind that "The Old Farmer's 2023 Almanac" calculated the last spring frost will be May 7 this year.

That date is based on 1991-2020 climate normals from the National Oceanic and Atmospheric Administration, and the last light freeze in spring is only a 30% probability — which means there's a good chance the last spring frost could occur before or after May 7. Either way, there is plenty of work to do now to bring your garden to its full potential.

Backyard Harvest boxes are one of Mountain Roots Food Projects' efforts to create food security in the Gunnison Valley. (Courtesy/Mountain Roots Food Project)

Since graduating from Penn State with a focus on soil science, Roni Pasi has worked on small scale vegetable production farms, including farms in Southern California and Ohio. Her work includes a stint in Idaho with the USDA's Natural Resources Conservation Service before coming to Colorado's Front Range.

Last November, she moved to the high country, becoming the director of regenerative agriculture for the nonprofit Mountain Roots Food Project in Gunnison Valley, where she's working to tackle food security.

Mountain Roots' mission has three prongs, with a goal of creating a regenerative food system in the valley. The first two encompass growing food by coordinating a Community Supported Agriculture farm and Backyard Harvest, a food bank component primarily funded through grants to distribute 100 boxes of fresh vegetables each week during growing season.

Simon Jackson, AmeriCorps member in the Regenerative Agriculture program, harvests root crops from Mountain Roots Food Project's Community Farm. (Courtesy/Mountain Roots Food Project)

There is also an educational component with a farm-to-school program that offers summer camps and classroom education in Crested Butte and Gunnison.

The organization offers opportunities for local volunteers and Healthy Futures AmeriCorps members who dedicate a year of service.

Mountain Roots' elevation — Gunnison sits at 7,500 feet and Crested Butte is at 8,500 feet — has a shorter growing season than the Front Range. For comparison, Weld County's average elevation is 5,056 feet.

"Even though you're higher elevation than the rest of the country, there are about 120 frost-free growing days," Pasi said.

Mountain Roots Food Project starts seeds in February or March in a straw-bale, climate battery greenhouse which is a prototype for a company called Build.Sow.Grow, located in Crested Butte South. (Courtesy/Mountain Roots Food Project)

According to the "The Old Farmer's Almanac," the growing season in the Greeley area is 148 days, which means there is some time during the season where there could be frost. That's not necessarily a problem, since there are many vegetables that thrive in colder temperatures.

"On the Front Range, it can get down in the 30s and then up to the 90s the next day, but you have the window of time to work with," Pasi said.

Heavy feeders v. light feeders

Deciding when to plant outside depends on the type of vegetable you're cultivating. Vegetables that take more nutrients out of the soil are called "heavy feeders." The group includes tomatoes, peppers, broccoli, cabbage and beets. Light feeders — carrots, garlic, onions and radishes — take less nutrients from the soil.

Kaelyn Schultz, an AmeriCorp member in the Food Security program at Mountain Roots Food Project in the Gunnison Valley, shows off handfuls of rainbow carrots grown at high altitude. (Courtesy/Mountain Roots Food Project)

Pasi recommends extending the planting season for heavy feeders by getting ahead with seeds indoors, particularly for tomatoes, peppers and eggplants because they take longer to mature. Tomatoes, for example, take 90 days to produce fruit, which is why they need a head start before they can soak up the sun

Heading brassicas — a genus that includes broccoli, cauliflower and cabbage — mature slowly because a lot of energy goes into creating their leafy, dense heads. Starting those seeds indoors gives more invested time to reach maturity.

Root vegetables, garlic and other alliums and some herbs, particularly those with woody stems like rosemary and thyme, can also get a head start and thrive with cooler temperatures.

Beets, carrots, rutabagas and turnips get sweeter as the mercury starts to drop. That's why it's a good idea to start them growing earlier inside and put them into the soil a little later in the season to get the best taste benefit.

Emilie Sidlinger, an AmeriCorps member in Mountain Roots Food Project's Environmental Educator program, holds a tomato plant. (Courtesy/Mountain Roots Food Project)

"Over the course of the growing season, these vegetables store up energy in the form of starches. When temperatures start to drop, they convert these starches into sugars, which act as an anti-freezing agent for their cells," according to Gardening Know How.

Light feeders like lettuces, spinach, baby greens, carrots and radishes can be sown directly into your garden beds and can get a later start.

"If you have not already started seedlings for your garden, look to support a local

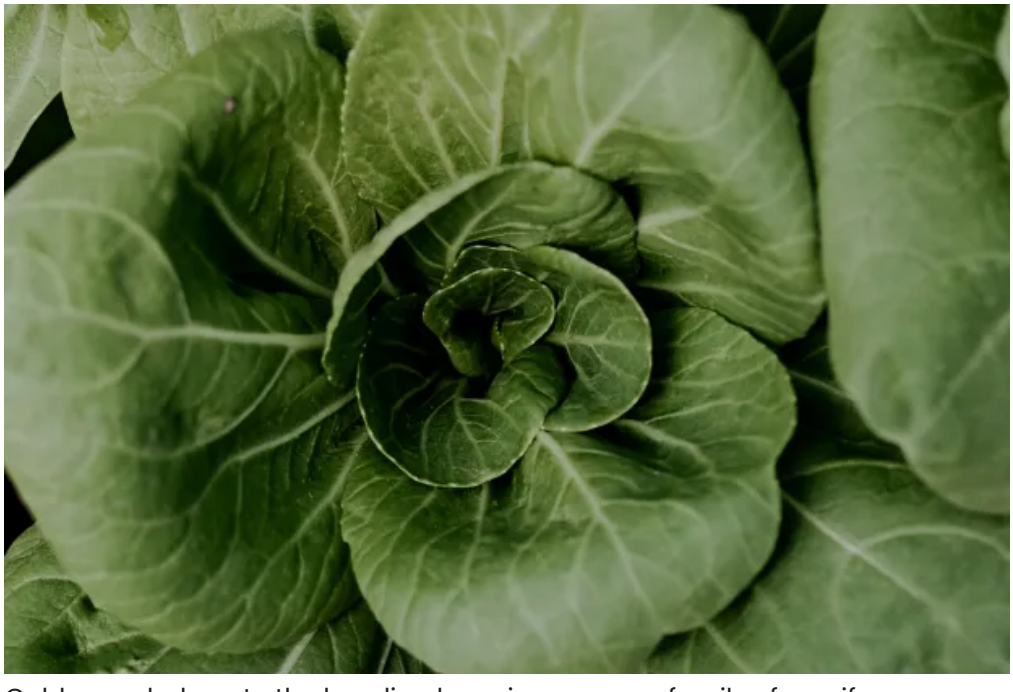
Setting up a growing area in your home is easy, all you'll need is a south-facing window to get things started. If your living space can accommodate it, a germination zone with plastic domes placed over seeding trays or even plastic wrap to trap heat and retain moisture works well, as do heat mats.

Start prepping your garden area in April and May

Regenerative agriculture is a way of growing food with a more holistic approach that prioritizes the well-being of the entire ecosystem, Pasi said.

"You're caring for the soil, including microorganisms like protozoa, bacteria and fungi, all of which are important for providing nutrients to the plants. The more we supply plants a home with organic matter and carbon, we are feeding the plant stock. We're also not using inorganic fertilizers. It's all created with the life in the soil," she explained.

Caring for the soil to regenerate organic matter gives vegetables more intense flavor.



Cabbages belong to the heading brassica genus, a family of cruciferous vegetables that take longer to mature than other vegetables. Brassicas benefit from an early inside start from seeds or seedlings. (Courtesy/Mountain Roots Food Project)

“When you care for the soil, the flavor of what grows in it changes,” Pasi said. “If you go to the grocery store and take a tomato off the shelf that was harvested green in California, it’ll have a lack of flavor because the plant didn’t develop on the vine. Like the terroir of wine, the flavor transmits from the soil through the rootstock.”

To prep your garden, remove any protective covering on the beds, including straw, mulch, cardboard or fabric. Turn any crop residue under the soil and add quality compost before planting seeds or seedlings.

Keep plants safe from wildlife

Before the plants sprout, learn what types of wildlife and pests have access to your growing space.

“You’re so proud of your radish tops, so there’s nothing worse than going out to the garden and seeing them all gone overnight,” Pasi said.

Depending on where you live, there could be deer, elk, rabbits, voles, mice or prairie dogs. And then there are the squirrels to consider at lower elevations.

Kaelyn Schultz and Izzy Rosenstein are two AmeriCorps members serving in Mountain Roots Food Project’s food security program. (Courtesy/Mountain Roots Food Project)

Setting up a game fence works as a deterrent if it's tall — Pasi recommends a height of eight feet that's wide enough to prevent game from getting into the space. Depending on the scale of your garden, placing domed wire cages over heads of broccoli and lettuce is an option; a floating row cover like those used to protect against frost and hail can also deter rabbits. Raised beds can help, but since most of these animals can hop up into them, they might not be the best preventative measure.

Pasi acknowledged gardening in Colorado requires a bit more patience and resilience compared to growing food in warmer states.

"We are susceptible to unpredictable frosts, drought, smoke and a shorter window of growing food with 'ease,' yet it is still possible to have a highly productive space," she wrote in an email. "Gardening is a lot of trial and error. Experiment as much as you like, and don't underestimate the amount of food you can grow in a small space."

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Emily Kemme